

A grammatical sketch of Wolof

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December 16, 2019

1 Introduction

Wolof is an Atlantic Niger-Congo language spoken primarily in Senegal, the Gambia, and Mauritania. Wolof has over 5 million speakers and is one of the six official languages of Senegal. In this study of Wolof, we observe some phonological constraints, the assignment of noun classes based on semantic and phonological grounds, and primarily SVO sentence structure which shows head-to-head movement in simple sentences and more complex movement in contexts such as *wh*-questions or embedded clauses.

Many urban speakers of Wolof are bilingual in French (commonly in Senegal) or English (commonly in Gambia) and the language reflects heavy borrowing from French and Arabic. Data presented in this study was elicited over a four-month period in a classroom. The speaker consulted is a native speaker of a southern dialect of Wolof, and is bilingual in French from having used it in school.

2 Phonology

The glossing conventions used in this class correspond to the following consonant and vowel inventories (Torrence 2005) of Wolof.

Consonants

	Labial	Alveolar	Palatal	Velar	Uvular	Glottal
Stop	p b	t d	c j	k g	q	ʔ
Fricative	f	s		x	(χ)	h
Nasal	m	n	ɲ	ŋ		
Prenasalized	mb	nd	nj	ng		
Glide			y	w		
Liquid		l r				
Affricate					qχ	

Vowels

All long vowels other than aa have been written by doubling the symbol of the corresponding short vowel.

sound	symbol
/i/	i
/u/	u
/e/	é
/o/	ó
/ɜ/	e
/ɔ/	o
/ə/	e
/a/	à
/aa/	aa
/ɑ/	a

2.1 Phonological constraints

In this subsection, I make note of three observed markedness constraints in Wolof. The satisfaction of these constraints occurs through the violation of MAX, leading to the inference that MAX is a low-ranked faithfulness constraint in Wolof. The constraints are explained below.

M1: *NNC is violated whenever there is a sequence of consecutive nasal consonants followed by a non-nasal consonant. Contrasting *nga* in 1 with *ga* in 2 demonstrates that in order to satisfy this constraint, one of the nasal consonants does not surface. M1 cannot be generalized as an *NN constraint (*lán moe* in 1), nor is it a *NⁱNⁱ constraint (3).

- (1) *lán moe tax nga*
why SUB.2SG
"Why did you..."

- (2) *lan ga*
what SUB.2SG
'..what you..'

- (3) *moom moo gis Samba*
3SG.strong 3SG see Samba
'It is he who saw Samba.'

M2: *(V)[+Syll, -Stress](V) is violated whenever there is a digraph consisting of an schwa (obligatorily unstressed) preceded or succeeded by any non-schwa¹ vowel. This is resolved through syncope, that is, the deletion of schwa. This is seen in 4.

¹Torrence (2005) notes that the long schwa is 'rare' but does not say it is unattested.

- (4) rak^h(*e) -u Samba
brother POSS Samba

‘Samba’s brother’

M3: [Vx][Vy]: If we divide the vowels in Wolof into two classes as below, then M3 is violated whenever there is a digraph of vowels belonging to the same class. This constraint may arise from trying to restrict digraphs to those containing vowels that are clearly distinguishable.

Class 1 é, e, i, u
Class 2 o, ó, a, à

Violations of M3 in the underlying representation are also resolved by violating MAX. Consider the following future tense, negative sentence in its underlying (5) and surface (6) representation, particularly the preference of /du/ over /di-ul/, and hence the avoidance of the disallowed digraph /iu/. The fact that /du/ surfaces rather than something like /dul/, /dil/, or /il/, suggests that the loss of /l/ occurs due to a different constraint, which the data is insufficient to derive. Of the remaining candidates, /du/ and /di/, /du/ surfaces, which suggests a faithfulness constraint that discourages entirely deleting any morphemes.

- (5) *Samba di -ul jendë teere
Samba FUT NEG.SUB buy book
‘Samba will not buy a book’

- (6) Samba du jendë teere
Samba FUT NEG.SUB buy book
‘Samba will not buy a book’

In addition to these constraints, Wolof roots display harmony with respect to advanced tongue root (\pm ATR) feature (Ka 1993, Unseth 2009). While we did not focus on vowel harmony in our study, it would be interesting to see whether and how harmony extends to affixes.

3 Word Classes

In this section, we will discuss word classes in Wolof and transformation between them, particularly nouns, verbs, adjectives, and pronouns.

3.1 Nouns

Mc Laughlin (1997) states that Wolof singular nouns fall under eight classes and plural nouns fall under two classes². This subsection seeks to present hypotheses regarding semantic categories of the noun classes,

²A total of seventeen classes are proposed by Babou & Loporcaro (2016). In this study, I only consider the eight basic noun classes, identified on the basis of their corresponding determiners.

revisit previous documentation on the productivity of certain noun classes, and use this information to provide a perspective on how class assignment is shifting with time.

The eight singular classes are defined here as the k-, b-, g-, l-, w-, s-, j-, and m- classes, while the plural classes are the y-class and ñ-class. In our study, these were observed chiefly through the determiners taken by the noun. For instance:

	class	meaning
<i>teere bi</i>	b-class	the book
<i>cinwaar li</i>	l-class	the ladle
<i>kerr-gi</i>	g-class	the house
<i>xale yi</i>	y-class	the children

Singular classes are assigned on both semantic and phonological bases. After describing each class in some detail, I will present questions about the interaction between semantics and phonology as well as questions about the re-assignment of nouns to the default b-class.

Plural classes are not discussed here, since seven of the eight singular classes correspond to a single plural class (the y-class). The one remaining singular class, the k-class, corresponds to the plural ñ-class.

The **k-class** is the smallest class. The only attested word in our data belonging to this class is *nit*, meaning ‘person’. *nit* is interesting because it is optional in adjective clauses. Consider the following two ways to say ‘man’, and the usage of ‘man’/‘men’ in a sentence.

- (7) *ku goor*
CL man
man (lit. person who is a man)
- (8) *goor gi*
man CL
the man
- (9) *ku -goor -ki jéndë -na teere*
CL.SG man CL.SG buy SG book
‘The man (lit. the person who is a man) bought the book.’
- (10) *goor -yi jéendu -ñu teere*
man CL.PL buy NEG.SUB book
‘The men did not buy a book.’
- (11) *ñu -goor -ñi jéendu -ñu teere*
CL.PL man CL.PL buy NE.,PL book
‘The men (lit. the people who are men) did not buy a book.’

Note that DPs containing adjectives in Wolof are of the form below, where C is the consonant corresponding to the noun class of Noun. More about adjectives is discussed in a later section.

Structure	Meaning
Noun C[u] Adjective C[i]	the Adjective Noun

In 7, 9, and 11, we see usage of CL markers corresponding to the k-class. However, these DPs have the structures given above, but with apparently a missing noun (we can rule out the possibility of *goor*

being in the k-class, due to 8 and 10). Therefore we conclude that *nit* can be dropped in DPs containing adjectives. This suggests that *nit* is either the only word in this class or all words in this class have a meaning strongly similar to ‘person’, because the class marker is sufficient to infer the dropped noun.

The **b-class** is the default noun class in Wolof (Rambaud (1898), Irvine (1978), Mc Laughlin (1997)). Nouns are assigned this class when they do not phonologically or semantically fit into any others. There is ongoing shifting of nouns from other classes into the b-class.

Our data suggests that the b-class is composed entirely of such nouns, which either cannot be assigned a different class or have lost their originally assigned class marker. It does not have any phonological or semantic categories of its own. Mc Laughlin (1997) proposes that fruits belong semantically to the b-class. While this is possible, I present the alternate hypothesis that fruits belong to the s-class and a few have moved to the b-class due to phonological constraints. A few proposed processes of class assignment and shifting are discussed below.

Class assignment Noun classes in Wolof are assigned on a semantic and phonological basis. Some nouns then undergo a shift to the b-class. There seems to be a difference in words shifting to the b-class between the northern and southern dialects of Wolof³, and our data is from a southern dialect.

The phonological basis of classification seems to rely largely on the word-initial consonant, with nouns being assigned to a class corresponding to the same consonant or a consonant that differs by few attributes (such as position or voicing). The semantic basis of classification is approximately as given in the table below⁴.

Class	Categories
si	small objects, fruit
mi	liquids, verbs, abstract or uncountable nouns
wi	things related to the ground
li	kitchen appliances, body parts
gi	times of day
ji	individuals, family

The **s-class** has been shown in the past to include diminutive forms of nouns. While some objects that may be considered ‘small’ were placed in this class, we did not observe any diminutive forms of nouns in this class. The mechanism seen by Mc Laughlin in 1997 in which a diminutive noun is formed by prenasalizing the initial consonant of the noun and placing it in the s-class, is absent from our speaker’s dialect of Wolof (12 and 13).

- (12) **mbey* *si*
 goat.DIM CL
 ‘the small goat’

³Our informant, who speaks the southern dialect, classified words like *soble* (onion) and *jinjeer* (ginger) both into the b-class. Mc Laughlin (1997) had seen these placed in the s- and j-classes, respectively. Our speaker later said that the s- or j-class assignments may be grammatical in the north.

⁴The table phrases the s-class as containing ‘small objects’ rather than diminutives as the assignment of diminutives to the s-class is not attested in the data.

- (13) *bey bu ndau bi*
 goat CL small CL
 ‘the small goat’

Examples of nouns found to be in the s-class are in the table below.

Noun	Meaning
asəmaan si	the sky
suf si	the sand
safara si	the fire
cəlluwer si	the whirlwind
sexau si	the tea tree
ndau si	the woman
jaxaar si	the jaxaar fruit
sidem si	the sidem fruit
ditax si/bi	the ditax fruit

cəlluwer, *sexau*, and *ndau* may be referring to small objects. The speaker clarified that the *cəlluwer* is a small whirlwind, and the *sexau* is a shrub rather than a tree. *ndau* is also an adjective meaning ‘small’. Hence, the s-class may still be loosely associated with diminutives.

The s-class also contains some fruits, with other fruits such as *uul*, *goyap*, *sumpu* being in the b-class. Even though there are semantic categories that belong to the s-class, they are subject to some phonological constraints.

The **m-class** contains liquids, gerunds, and abstract or uncountable nouns. These assignments are all subject to the phonological constraint that m-class words must have a nasal or nasalized consonant at the word-initial position. For instance, compare the liquids *meo mi* (milk) or *ndox mi* (water) to *deret bi* (blood) or *siro bi* (syrup).

Noun forms of verbs are assigned the m-class. This applies to verbs for which the transformation process into a noun involves the nasalization of the initial consonant, as in the following examples.

Root verb	Derived noun	Noun meaning
bey	mbey (mi)	(the) farming
jendə	njend (mi)	(the) buying
nellou	nellou (mi)	(the) sleeping

For the **w-class**, we have relatively less data. In addition to phonological assignments, we see objects that can be thought of as ‘earth-born’, such as a stone or underground vegetables⁵. The phonological assignments are of [w]-initial words, although some [x]-initial words are also included.

⁵The onion, which is *soble bi*, is likely due to it being a loan word and hence being phonologically assigned the s-class (as noted by Mc Laughlin), and then eventually shifting to the b-class. A similar process is likely for *siro si* (‘syrup’), which does not get assigned the m-class in spite of being a liquid.

Noun	Meaning
karot wi	the carrot
nawe wi	the turnip
doʸʔ wi	the stone
xaluyon-wi	the highway
xeu wi	the festival
werr wi	the moon
wei wi	the song

The **l-class** contains kitchen appliances (regardless of phonology) and some body parts. Body parts may be assigned on a phonological basis, although not evident from our data, or on a semantic one such as smooth/protruding or movable/immovable body parts.

Noun	Meaning
cinwaar li	ladle
cin li	pot
inde li	steaming pot
kubeer li	the lid
lex li	the cheek
kanaam li	the face
tesen li	the heel

The **g-class** contains, among other things, times of day. This includes words for ‘light’ and ‘darkness’. Many k- or g-initial nouns are also phonologically placed in the g-class.

Noun	Meaning
garab gi	the tree
kerr gi	the house
gelem gi	the cat
guddi gi	the night
becek gi	the daytime
lerr gi	the light
lendem gi	the darkness

The **j-class** adopts loanwords on a phonological basis. It also accommodates nouns which fit a semantic classification of ‘individuals’. Immediate family and maternal extended family members are assigned the j-class regardless of phonology.

Noun	Meaning
yalla ji	the God
yai ji	the mother
jigen ji	the woman
rëk ^h ë ji	the younger brother
mak ji	the older brother
dom ji	the child
jumaa ji	the mosque

Throughout this section, the semantic categories presented are not an exhaustive list. For most classes, it is very likely that new semantic categories could be proposed with further research.

It is evident that class assignment based on semantics and that based on phonology are not always independent processes. The data suggested a layered application in which nouns are assigned semantic

categories, subject to phonological constraints. Usage of these constraints likely expanded into some nouns being assigned categories on purely phonological terms.

Mc Laughlin (1997) suggests that class assignment is a productive process, in that class is marked not only through the determiner but also in the form of a prefix on the noun. This prefix is what leads to apparent phonologically similarity between the nouns.

While such a process is quite likely in the m-class, it is not so in other classes. The m-class shows evidence of productivity through overgeneralization. Specifically, it is excluding liquids which do not begin with a nasal or prenasalized consonant, and including non-liquid uncountable nouns which do begin with prenasalized consonants. Meanwhile, the s-class is one example of a class that is losing its productive process of diminutive formation.

Noun	Meaning
meo mi	the milk
ng ^y aar	the smoothie
ndox mi	the water
siro bi	the syrup
deret bi	the blood
mboqu mi	the corn
n ^y ex mi	the grass

There are two hypotheses about the shifting of nouns to the b-class. The first is the downward shift, which proposes that if a noun no longer fits the criteria of its initial class, it must shift to the b-class. As demonstrated above, some fruits are in the s-class but most are in the b-class. If the downward shift hypothesis is true, it would predict that all fruit was initially assigned the s-class and most words underwent a shift to b-class.

The second hypothesis is that nouns can undergo re-assignment to a class other than the default b-class. This predicts that fruits in fact belong to the b-class but some have shifted to the s-class, on a phonological basis.

Faithfulness to the class marker is secondary to reducing ambiguity in a phrase. In the following possessive constructions, the 3SG possessive particle *-ēm* is followed by ‘bi’ rather than ‘mi’ in m-class words, to make the distinction between ‘the X’ (17) and ‘his/her X’ (16) clear. In sentences like 15 or 14, changing the class marker is not required.

- (14) *Samba gis -na teer -em- bi*
 Samba see -SUB.3SG book -POSS.3SG -CL
 “Samba sees his book.”

- (15) *Samba gis -na golo -m- gi*
 Samba see -SUB.3SG monkey -POSS.3SG -CL
 “Samba sees his monkey.”

- (16) *Samba gis -na meo -m- bi*
 Samba see -SUB.3SG milk -POSS.3SG -CL
 “Samba sees his milk.”

- (17) *Samba gis -na meo -m- mi*
 Samba see -SUB.3SG milk -POSS.3SG -CL
 “Samba sees the milk.”

3.2 Verbs

Wolof verbs bear markers for person and number (agreement), aspect, and tense. The agreement markers behave like pronouns, as discussed in a later section. The agreement markers are given below.

	Singular	Plural
1p	-naa	ñu
2p	-nga	-ngen
3p	-na	-ñen

Examples of variation due to tense, number, and person can be seen in 18 through 22 below.

- (18) *Samba gis -na Kumba*
 Samba see -SUB.3SG Kumba
 “Samba sees Kumba.”⁶
- (19) *(man) gis -naa Kumba*
 I see -SUB.1SG Kumba
 “I see Kumba.”
- (20) *Samba ak Sallah gis -ñen Kumba*
 Samba with Sallah see -SUB.3PL Kumba
 “Samba and Sallah saw Kumba.”
- (21) *Samba gis -oon -na Kumba d^yembe*
 Samba see -PST -SUB.3SG Kumba yesterday
 “Samba saw Kumba yesterday.”
- (22) *Samba di -na jëndë teere*
 Samba FUT SUB.3SG buy book
 ‘Samba will buy a book.’

In 21 and 22 we notice that the tense marker seems to be appearing in different positions with reference to the verb. This is due to movement of the verb root and is discussed further in the syntax section.

Morphemes indicating tense, agreement (‘agr’) and aspect (‘asp’) are ordered relative to each other. The ordering is:

⁶This can also be translated as ‘Samba saw Kumba’, due to being the perfective aspect.

Asp >Tense >Agr

The imperfective aspect is expressed by using the particle *ngii* in the Asp position. This is accompanied by movement of the subject marker. In this position, it takes the form of a weak subject pronoun rather than a subject marking affix. Sentences 23 and 24 below show that *ñu* or *mu*, which appear before *ngii* are related to the subject, because they change with the number of the subject.

- (23) *xale-yi ñu ngii dau bu gau*
children-CL 3PL.weak IMPF run CL fast
‘The children run fast.’

- (24) *Kumba mu ngii dau bu gau*
Kumba 3SG.weak IMPF run CL fast
‘Kumba is running fast’

Gerunds in Wolof are simply the verb roots, as in 25 and 26.

- (25) *dau defa méti*
running is difficult
‘Running is difficult.’

- (26) *Kumba dau -am defa yex*
Kumba run -POSS.3SG is slow
‘Kumba’s running is slow.’

3.3 Adjectives

Adjectives in Wolof are exclusively predicative. Below are two instances of adjectives, one as a sentence and one as a relative clause.

- (27) *teere bi dafa hong*
book CL.det be.3SG red
‘The book is red.’

- (28) *teere bu hong bi*
book C.CL red CL.det
‘the book which is red’

In both types of constructions 27 and 28, the adjective can take verb affixes such as the past tense (29, 30) or negation markers, which indicates that it is behaving as a predicate.

- (29) *teere bi dafa honq-oon*
 book CL.det be.3SG red-PST
 “The book was red.”
- (30) *teere bu honq-oon bi*
 book C.CL red-PST CL.det
 “the book which was red (but may be a different color now)”

3.4 Pronouns

Wolof pronouns can be classified on the basis of number and person, similar to verbs. There are ‘strong’ and ‘weak’ pronouns, as in the table below, with blank cells representing gaps in the data. The pronouns we find in our data are consistent with pronouns found by Martinovic (2015).

	Strong	Weak (Subject)	Weak(Object)
1 S	man	ma	ma
2 S	yɔu	nga	la
3 S	moom	mu	ku/ko
1 P	ñun	nu	nu
2 P	yen	ngen	
3 P	ñoom	ñu	lën

The distinction between the types of pronouns is seen in the environments where they are permitted. Martinovic (2015) extends the analysis of strong and weak pronouns in European languages by Cardinaletti and Starke (1999) to Wolof pronouns, stating that strong pronouns only appear in four contexts: when focused, as arguments of prepositions, in coordination with another DP, or when dislocated.

Of these, our data explore focus and coordination. The data confirms that strong pronouns are obligatory when in coordination with other DPs (whether a lexical DP or a pronominal one). This is evident from examples 31 or the pair 32 and 33 below. We also find that strong pronouns are obligatory under focus, as in 34 and 35.

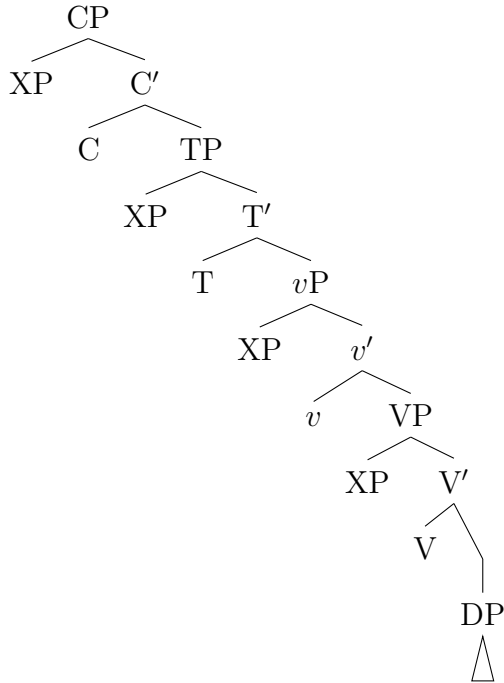
- (31) *Anta gis-na Samba ak man/*ma*
 Anta see-SUB.3SG Samba P me/me(weak)
 ‘Anta sees Samba with me’
- (32) *man ak yɔu gisñen Samba*
 1SG.strong with 2SG.strong see-PL Samba
 “Me and you see Samba.”
- (33) **ma ak yɔu gisñen Samba*
 1SG.weak with 2SG.strong see-PL Samba
 (Me and you see Samba.)
- (34) *man maa/maa-ui gis Samba*
 1SG.strong 1SG see Samba
 ‘It was I who saw Samba.’

- (35) *you yaa/nga/yaa-i gis Samba*
 2SG.strong 2SG see Samba
 It is you who saw Samba.
- (36) *(man) am-naa nit ku ma gis dʒembe*
 (1SG.strong) have-SUB.1SG person ku-SUB.1SG see yesterday
 ‘I saw some person yesterday (lit. I have some person who I saw yesterday.)’
- (37) *Samba gis-na ma.*
 Samba see-3SG 1SG.weak
 “Samba sees me.”

Martinović (2015) also argues that subject markers in Wolof are a type of weak pronouns, rather than agreement markers. Our data is consistent with this, and we also find that the weak subject pronouns act as clitics. We see instances of weak subject pronouns on verbs or on interrogative particles. We also find strong pronouns to be optional, but grammatical, in subject position (36).

4 Syntax

Sentence structure in Wolof is SVO. The basic clause structure can be represented by the tree below.



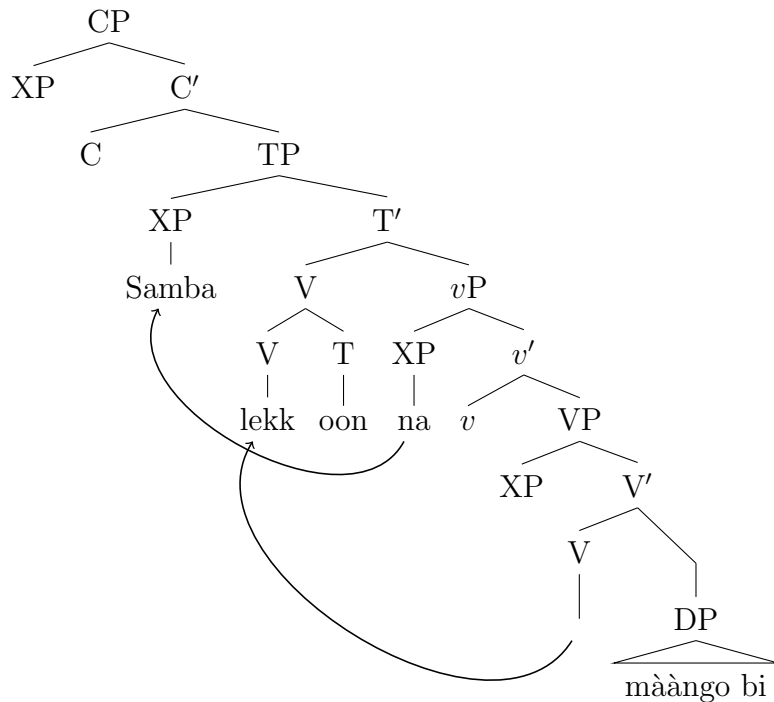
When a sentence is formed, two types of movement are observed. One is movement of the verb from the head of VP to the head of TP (which projects to form T and V nodes). Another is movement of subject from Spec(vP) to Spec(TP). Spec(TP) must be filled in Wolof, since SVO word order shows the subject appearing at a higher level than TP (tense or aspect). Aspect and tense, situated in TP, are ordered according to the sequence discussed in the Verbs section. Agreement might be situated in TP, or it may be a trace left by the subject after its movement to Spec(TP). Martinovic (2015) argues that the agreement

marker is in fact a weak subject pronoun. Considering it to be a trace left after movement of the subject is in line with this hypothesis.

Consider the sentence:

- (38) *Samba lekk -oon -na mààngo bi*
 Samba eat PST SUB.3SG mango CL
 ‘Samba ate the mango.’

This sentence displays verb and subject movement, as illustrated in the tree below.



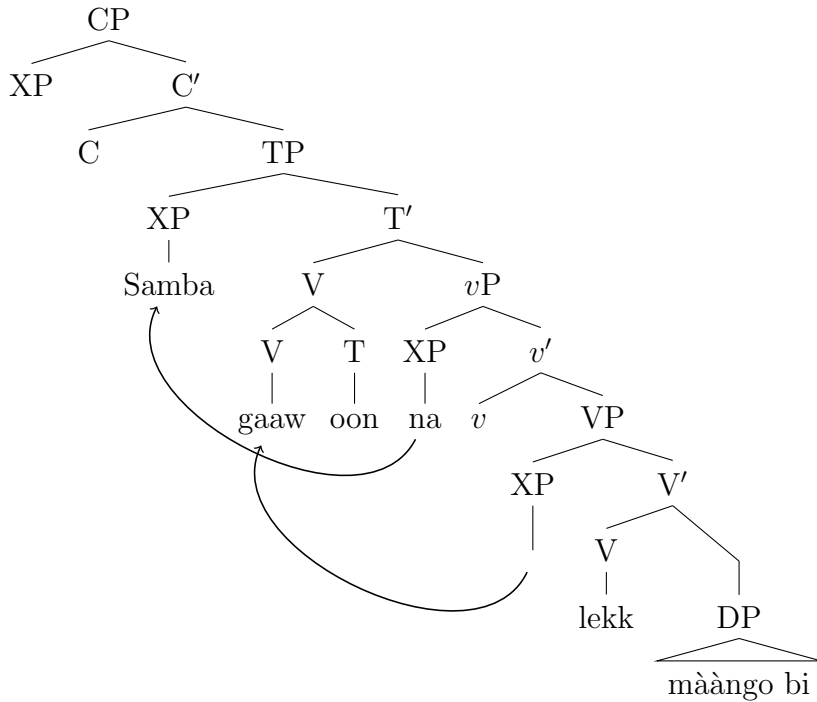
However, verb movement only occurs when denoting actions that have already occurred. That is, the verb does not move in the imperfective aspect or in the future tense. This leads to sentences like 39, which is future tense and 40, which is imperfective. In both examples, the verb is surfacing after the Asp/Tense marker due to not having moved from its original VP-head position. In 41, which is the present perfect form, *lekk* does undergo movement.

- (39) *Samba di -na gaw lekk mango b-i*
 Samba FUT SG fast eat mango CL
 ‘Samba will quickly eat the mango.’

- (40) *Samba mungi lekk mango b-i*
 Samba IMPF eat mango-CL
 ‘Samba is eating the mango.’

- (41) *Samba lekk -na mààngo bi*
 Samba eat SUB.3SG mango CL
 ‘Samba ate the mango.’
- (42) *Samba gaaw -oon -nàà lekk mango b-i*
 Samba fast PST SG eat mango CL
 ‘Samba ate the mango quickly.’

Additionally, adverbs block the movement of the verb by themselves undergoing movement and occupying the sister node of T. Consider sentence 42 above. The proposed structure of this sentence is illustrated below.



4.1 Negation, copulars, and imperatives

In this section we discuss a few types of sentences, specifically those containing negation, those containing copulas and imperative sentences.

Negation is expressed by the marker ‘u’ on the verb, which precedes the pronominal marker. The exact form of the negation marker is governed by the subject, which C-commands it. In the third person singular form, subject movement also does not leave a trace. This is seen in sentences 43 and 44, where the subject pronoun *na* does not surface and the verb takes *ul* as a negation marker.

- (43) *Samba jéndě -na teere*
 Samba buy SG book
 ‘Samba bought the book.’

- (44) *Samba jénd -ul teere*
 Samba buy NEG,SUB book
 ‘Samba did not buy the book.’
- (45) *goor -yi jénde -ñen teere*
 man CL,PL buy PL book
 ‘The men bought the book.’
- (46) *goor -yi jéndu -ñu teere*
 man CL,PL buy NEG,SUB book
 ‘The men did not buy a book.’

In terms of syntactical structure, NEG is located higher than the tense marker but lower than aspect marker, as mentioned in the section on verbs.

Some **copular verbs** are *děf* and *n^yekk*. The particle used in imperfective construction, *mungii*, can also be used as a copular verb. Of these, *n^yekk* and *mungii* appear with prepositional predicates (52 and 53) while *děf* appears otherwise (51 and 49⁷). For non-prepositional predicates, the presence of a copular verb is not necessary (47 and 50).

- (47) *Kumba faiḥkat la*
 Kumba doctor LA
 ‘Kumba is a doctor.’
- (48) *Kumba ak Samba ai faiḥkat lēn*
 Kumba and Samba CL.PL doctor LEI
 ‘Kumba and Samba are doctors.’
- (49) *Kumba du faiḥkarr*
 Kumba NEG doctor
 ‘Kumba is not a doctor’
- (50) *teere b-i rafet -na*
 book CL.SG beautiful SG
 ‘The book is beautiful.’
- (51) *teere b-i dē-fa honq*
 book CL.SG COP red
 ‘The book is red.’
- (52) *Samba minggi ci neg b-i*
 Samba COP P room CL.SG
 ‘Samba is in the room.’
- (53) *Samba nekk-ul ci neg b-i*
 Samba COP-NEG P room CL.SG
 ‘Samba is not in the room.’

⁷‘du’, here, is probably formed by adding negation and replacing the 3SG ending for *dēfa* with *ϕ*.

4.2 Questions and Wh-movement

Yes/No questions These are formed by inserting the interrogative particle *ndax* at the beginning of the sentence, and varying tone. Although it is common, inserting *ndax* is not obligatory. Questions can be asked just by varying the tone of an assertive sentence.

- (54) *ndax Samba gis-na Kumba*
INT Samba see-SUB.3SG Kumba
'Does Samba see Kumba?'
- (55) *ndax Sallah ak Samba gis-n^yẽ Kumba*
INT Sallah and Samba see-SUB.3PL Kumba
'Do Sallah and Samba see Kumba?'

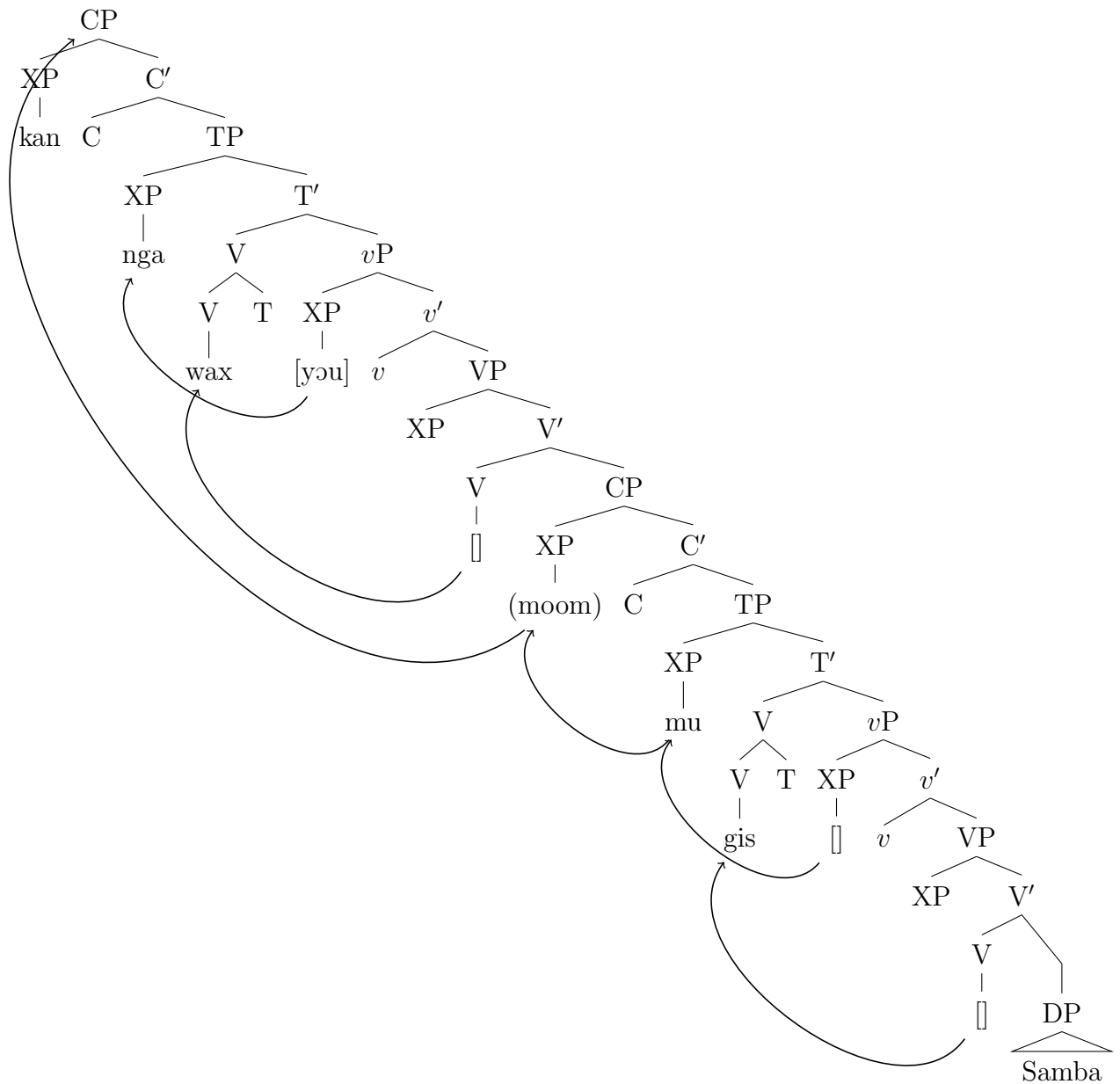
Wh-questions The formation of Wh-questions involves movement of the answer to the question from its position to Spec(TP) and then Spec(CP). There is also the requirement of a particle which is situated either in C or in Spec(TP), which is *mo* for a subject and *la* for an object or adjunct in the third person. This particle also changes with person and tense, as seen in 56 and 59, suggesting that this particle may be a type of pronoun as well. However, it is distinct from other weak pronouns (note that the weak subject 3SG pronoun is *ko* for assertive sentences).

- (56) *lan ga wax?*
what SUB.2SG say
'What did you say?'
- (57) *kan mo lekk -ul maango*
who C.SUB.3SG eat NEG mango
'Who didn't eat the mango?'
- (58) *làn -la Samba lekk -ul*
what C.OBJ.3SG Samba eat NEG
'What did Samba not eat?'
- (59) *fan-le-i Samba di dem*
where-OBJ.3SG-FUT Samba FUT go
'Where will Samba go?'

4.3 Embedded clauses

Another question of weak and strong pronouns arises when we look at embedded clauses. Consider the sentence below and its structure.

- (60) *kan-nga wax (moom) mu gis Samba?*
 who-2SG say (3SG.strong) 3SG.weak see Samba?
 ‘Who did you say saw Samba?’



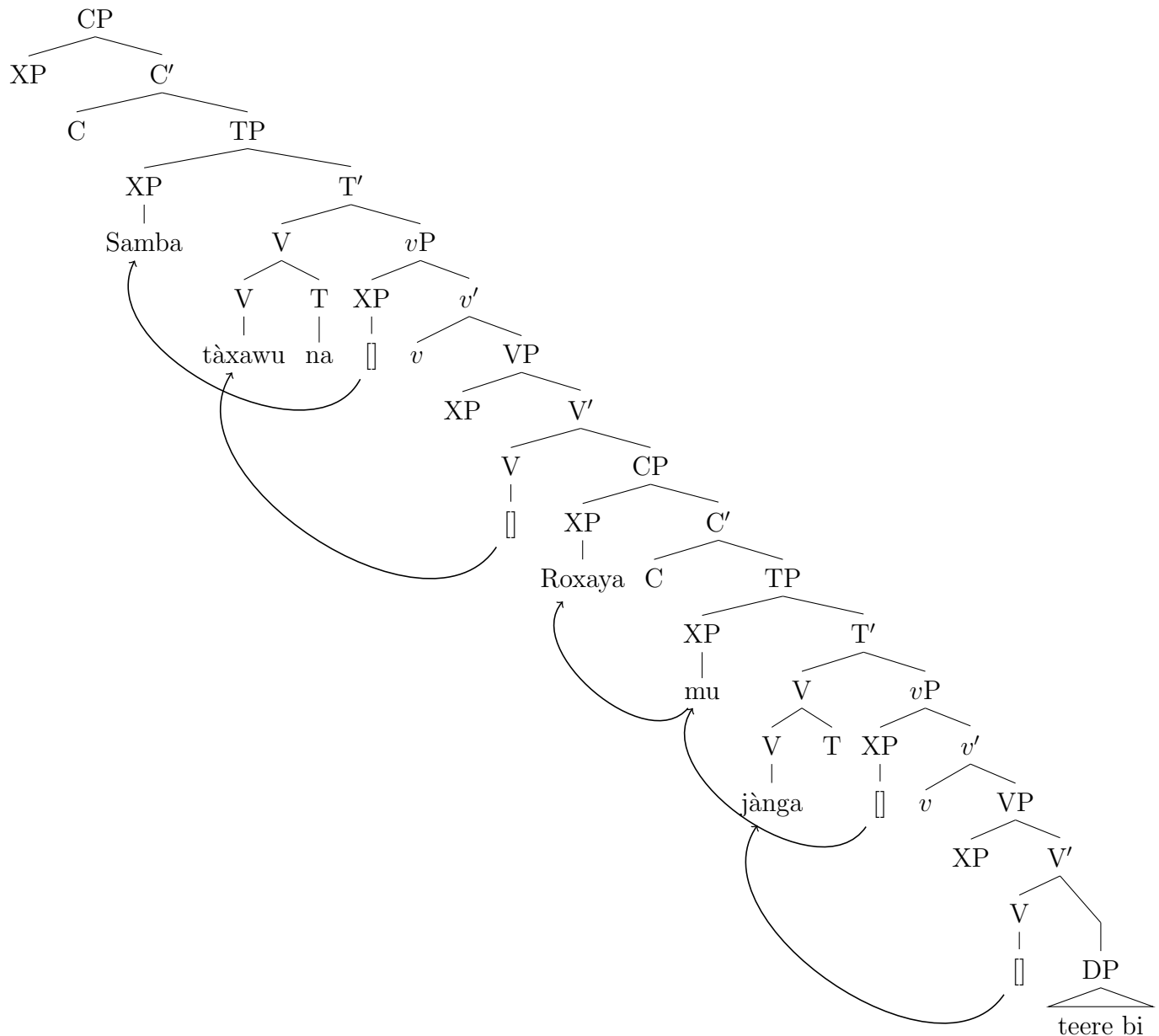
As *kan* moves from Spec(TP) to Spec(CP), it leaves behind a pronoun. I propose that it is leaving behind a strong pronoun when it moves, but a weak pronoun surfaces due to strong pronouns being ungrammatical in Spec(TP). This hypothesis would be supported if we could verify that the *nga* surfacing at Spec(TP) is due to the movement of *you* from Spec(vP).

Since strong pronouns are allowed in Spec(CP), *moom* is able to surface in Spec(CP). However, it is not obligatory, since Spec(CP) does not need to be filled. It acts as an indication that *kan* is moving to both Spec(TP) and Spec(CP) of the embedded clause before moving to its final position.

Constructions involving control (e.g. X wanted (Y to do Z)) also make use of embedded clauses. Consider the sentence:

- (61) *Samba tàxawu-na Roxaya CP[**(mu)* jànga teere b-i]*
 Samba begg-SUB.3SG Roxaya 3SG.WEAK read book-CL.DEF
 ‘Samba begged Roxaya to read the book.’
- (62) **Samba tàxawu-na Roxaya CP[moom jànga teere b-i]*
 Samba begg-SUB.3SG Roxaya 3SG.STRONG read book-CL.DEF
 ‘Samba begged Roxaya to read the book.’

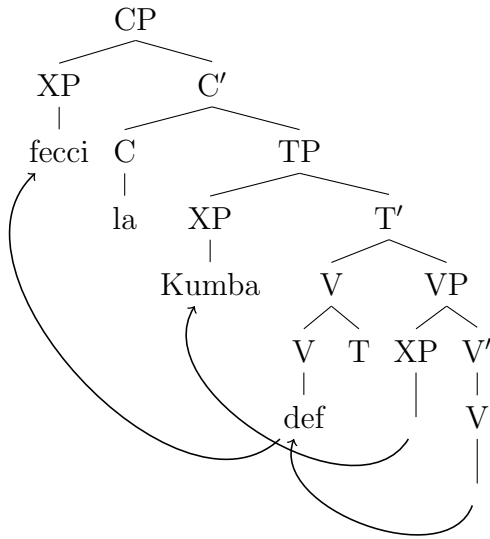
The structure of this sentence provides more evidence that an obligatory weak (/refstrong and /refweak) pronoun is left as a trace in Spec(TP) when a noun moves from that position. Additionally, there is no optional strong pronoun here, since the Spec(CP) position is occupied by *Roxaya*. The tense marker for the embedded clause becomes ϕ .



4.4 Verb focus and predicate cleft

Another situation in which movement occurs is when a verb is under focus. In such sentences, we observe do-support through the verb *def*. Consider sentence 63 below, which has an intransitive verb under focus. The verb has moved to Spec(CP), leaving behind *def* at the head of TP.

- (63) *fecci la Kumba def*
 dance LA Kumba do
 ‘Dancing is what Kumba did.’



If we look at this process for a transitive verb, we find multiple possible forms:

- (64) **lekk-oon la Kumba def jend*
 eat-PST LA Kumba do fish
 ‘Eating is what Kumba did to the fish.’
 8
- (65) *lekk la Kumba def-oon jend*
 eat LA Kumba do-PST fish
 ‘Eating is what Kumba did to the fish.’
- (66) *lekk-oon la Kumba def-oon maango b-i dʒembé*
 eat-PST LA Kumba do_PST mango-CL yesterday
 ‘Eating is what Kumba did to the mango yesterday.’

⁸Originally deemed incorrect, but might be okay to use with caution. Here I am considering it ungrammatical since I am not considering any special contexts in my analysis.

All three of these sentences contain movement of the verb *lekk* to a position higher than C, since the complementizer *la* appears in all three. However, what is common to the two grammatical options, 65 and 66, is the movement of *def* to the position previously occupied by *lekk*. In 64, *def* does not move to this position. If it had, the PST marker -oon would have surfaced on it. This is then ungrammatical because, as established at the beginning of this section, verbs in the past tense must move from VP head to TP head.

The mechanisms of movement of *lekk-oon* and *lekk* might be similar, but one involves movement of the tense marker as well. The reason for this is another question which can be explored in further study.

5 Future work and acknowledgements

There are many directions to go from here, but there are a few particular questions I would be interested in exploring through further study.

First, the assignment of noun classes. Our elicitation hints that there is a difference across dialects in the extent and manner of nouns shifting to the b-class. This would be better understood through a dialectal survey of common words and their noun classes. Additionally, to better understand phonological categorization, I would like to work with the noun classes of recent loan words. Working with loan words would also help validate or disprove the hypotheses made in the phonology section regarding markedness constraints.

Second, there is scope for further syntactic analysis and evidence collection regarding subject markers and whether they can be treated as weak pronouns. While I consider them to be weak pronouns throughout this sketch, I am open to analyzing them differently if an alternate analysis is evident and gives rise to more efficient sentence structures.

Acknowledgements: I would like to thank Lamine Touré for providing data and judgements over the course of this semester, Abdul-Razak Sulemana for guidance in elicitation and advice regarding forming and testing hypotheses, and Christine Soh for many discussions about the data and technical assistance in arranging this paper.

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